DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

SUPPLEMENTAL SPECIFICATION

Section 666—Vertical Drainage Wicks

Delete Subsection 666.2 and substitute the following:

666.2 Materials

A. Drain Fabrication

Ensure the following:

- Use drainage wicks consisting of a band–shaped plastic case, permitting continuous vertical drainage, wrapped in a filter jacket, installed in the ground by displacement methods, and spaced and arranged as shown on the Plans. Ensure drainage wicks are a prefabricated type consisting of a plastic drainage core encased in or integrated with a nonwoven polyester filter jacket. Use a band-shaped drain with an aspect ratio (width divided by thickness) not exceeding 50. Ensure the jacket allows free passage of pore water to the core without loss of soil material or piping. Ensure the core provides continuous vertical drainage.
- Ensure the assembled drains are resistant to wet rot, mildew, bacterial action, insects, salts, acids, alkalis, solvents, or any other ingredients in the site groundwater harmful to the drains. Use drains free from defects, rips, holes or flaws.
- Ensure the filter jacket is capable of resisting all bending, puncturing, and tensile forces imposed during installation and during the design life of the drain. Use a jacket material resistant to localized damage (e.g., punching through the filter by sand or gravel particles) and sufficiently rigid to withstand lateral earth pressures due to embedment and surcharge so the vertical flow capacity through the core will not be adversely affected. Ensure the jacket material is sufficiently flexible to bend smoothly during installation and induced consolidation settlement without damage, and will not undergo cracking or peeling during installation of the drain.
- Ensure the core is a continuous plastic material fabricated to promote drainage along the axis of the vertical drain.

B. Physical Properties

Ensure that the drain meets minimum requirements according to the following:

		Filter
Breaking Load	ASTM D 4632	30 lbs/in width (5 N/mm width)
Mullenburst	ASTM D 751	85 lbs/in^2 (585 kPa)
Elmendorf Tear	ASTM D 1424	200 grams
Permeability Coefficient		1x10^{-4} in/sec (3x10 $^{-3}$ mm/s)

666.2.01 Delivery, Storage, and Handling

A. Drain Protection

Ensure that the drain is wrapped in burlap or a similar heavy-duty covering during shipment and storage.

B. Storage Protection

Protect the storage area from sunlight, mud, dirt, dust, debris, and detrimental substances.

Office of Materials and Research